Entertainment Media Technology
Mississippi Curriculum Framework

Program CIP: 10.0201–Film and Video Technology
Program CIP: 50.0411–Simulation and Animation Design

March 2015

FACULTY WRITING TEAM MEMBERS

Kenneth Boyte, Hinds Community College-Rankin
Roderick Kwan, Hinds Community College-Rankin
Monica Washington, Hinds Community College-Rankin

ADMINISTRATOR WRITING TEAM MEMBERS

Sherry Franklin, Dean of Career/Technical Education,
   Hinds Community College-Pearl
Theresa Hamilton, Vice President,
   Hinds Community College-Raymond
Joyce Jenkins, Dean of Career and Technical Education,
   Hinds Community College-Raymond

BUSINESS AND INDUSTRY WRITING TEAM MEMBERS

Katie Calhoon, Producer,
   Look Away, LLC
Martin Hooley, Member
   Mississippi Video Game Industry (MVGI), LLC
James Everett, Member, LLC,
   Mississippi Video Game Industry (MVGI), LLC
Sam Everett, Member, LLC,
   Mississippi Video Game Industry (MVGI), LLC
Alan Hughey, Member, LLC
   Mississippi Video Game Industry (MVGI), LLC
Geri O'Neil, Independent Contractor
   StageLite Sound

OFFICE OF CURRICULUM AND INSTRUCTION TEAM MEMBERS

Elmira Ratliff, Curriculum Specialist, Office of Curriculum and Instruction,
   Mississippi Community College Board

The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

CONTENTS

RESEARCH ABSTRACT

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local vocational–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and vocational skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide vocational educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

This curriculum was revised in 2013 with the inclusion of Hinds Community College and Pearl River Community College. As of the fall semester of 2014, Hinds Community College is the only college offering the Entertainment Media Technology programs. During the fall of 2014, the Office of Curriculum and Instruction (OCI) met with several business and industry members in Central Mississippi, Northern Mississippi and Southern Mississippi. An industry questionnaire was used to gather feedback concerning the trends and needs, both current and future, of their field. Industry members stated the curriculum needed several changes to accommodate the Entertainment Media Industry. The Office of Curriculum and Instruction also met with advisory committee members who reiterated what industry had stated. There is a 10.42% increase in occupational demand at the regional level and a 15.58% increase at the state level for Film and Video Technology. Also, there is a 4.26% increase in occupational demand at the regional level and a 18.75% increase at the state level for Animation and Simulation. Program faculty, administrators, and industry members were consulted regarding industry workforce needs and trends.

INDUSTRY JOB PROJECTION DATA

Managers and Media and Communication Workers require education levels of long term on-the-job training and work experience in a related field. There is a 15.58% increase in occupational demand at the state level and an 10.42% increase at the regional level. Median annual income for Managers and Media and Communication Workers is $71,644.21 at the state level and $73, 815.42 at the national level. A summary of occupational data from the State Workforce Investment Board Data Center is displayed below:

Table 1: Education Level

Program Occupations	Education Level
Managers, All Other	Work Experience in Related Field
Media and Communication Workers	Long Term on-the-job Training

Table 2: Occupational Overview

	Region	State	United States
2010 Occupational Jobs	1228	1720	360,340
2020 Occupational Jobs	1356	1988	398,177
Total Change	128	268	37,837
Total % Change	10.42%	15.58%	10.50%
2010 Median Hourly Earnings	$30.76	$34.44	$35.49
2010 Median Annual Earnings	$63,970.40	$71,644.21	$73,815.42
Annual Openings	12	26	3,783

Table 3: Occupational Breakdown

Description	2010 Jobs	2020 Jobs	Annual Openings	2010 Hourly Earnings	2010 Annual Earnings 2,080 Work Hours
Managers, All Other	1,193	1,321	12	$44.59	$92,747.20
Media and Communication Workers	35	35	0	$16.92	$35,193.60
TOTAL	1228	1356	12	$30.76	$63,970.60

Table 4: Occupational Change

Description	Regional Change	Regional % Change	State % Change	National % Change
Managers, All Other	128	10.73%	15.51%	10.37%
Media and Communication Workers	0	0.00%	16.84%	12.43%

INDUSTRY JOB PROJECTION DATA

Audio and Video Equipment Technicians require an education level of long term on-the-job training. There is an 18.75% increase in occupational demand at the state level and an 11.90% increase at the national level. Median annual income for Audio and Video Equipment Technicians is $27,622.40 at the state level and $40, 539.20 at the national level. A summary of occupational data from the State Workforce Investment Board Data Center is displayed below:

Table 1: Education Level

Program Occupations	Education Level
Audio and Video Equipment Technicians	Long Term on-the-job Training

Table 2: Occupational Overview

	Region	State	United States
2010 Occupational Jobs	94	176	37,320
2020 Occupational Jobs	98	209	41,762
Total Change	4	33	4,442
Total % Change	4.26%	18.75%	11.90%
2010 Median Hourly Earnings	$13.28	$13.28	$19.49
2010 Median Annual Earnings	$27,622.40	$27,622.40	$40,539.20
Annual Openings	0	3	444

Table 3: Occupational Breakdown

Description	2010 Jobs	2020 Jobs	Annual Openings	2010 Hourly Earnings	2010 Annual Earnings 2,080 Work Hours
Audio and Video Equipment Technicians	94	98	0	$13.28	$27,622.40
TOTAL	94	98	0	$13.28	$27,622.40

Table 4: Occupational Change

Description	Regional Change	Regional % Change	State % Change	National % Change
Audio and Video Equipment Technicians	4	4.26%	18.75%	11.90%

ARTICULATION

Articulation credit from Secondary Career Pathway programs to Postsecondary Entertainment Media Technology is available. Secondary students who have completed the articulated the Secondary Career Pathway Courses listed below may be awarded articulated college credit according to Mississippi Community College Board (MCCB) guidelines (http://www.mccb.edu/pdfs/ct/StatewideArtManual201213.pdf).

Articulated Secondary Course	Articulated Postsecondary Course
Simulation and Animation Design (CIP:50.0411)	IMT 1114 History of Gaming
	IMT 1414 Photography for Games
	IMT 1513 Introduction to 3D Modeling
	ETT 1223 Illustration and Artistic Rendering

TECHNICAL SKILLS ASSESSMENT

Colleges should report the following for students who complete the program with a career certificate, technical certificate, or an Associate of Applied Science Degrees for technical skills attainment:

MS-CPAS2:

Entertainment Media-Film & Video Technology
Entertainment Media- Simulation & Animation Technology

ONLINE AND BLENDED LEARNING OPPORTUNITIES

Course content includes lecture and laboratory semester credit hours. Faculty members are encouraged to present lecture related content to students in an online or blended learning environment. Training related to online and blended learning will be available to faculty members through the Mississippi Community College Board.

INSTRUCTIONAL STRATEGIES

The faculty members will utilize the student learning outcomes to provide diverse instructional strategies for implementing this curriculum.

ASSESSMENT STRATEGIES

The assessment used for this program will be the MS-CPAS 2 and the instructors will provide assessment strategies to students completing this program.

PROGRAM DESCRIPTIONS

Film and Video Technology

The Film and Video Technology program provides individuals with the knowledge and skills necessary to find employment in the film and video industry. The program prepares its students to work on feature film, television commercials, music videos, documentary films, Internet multimedia and other audio-visual media forms. The Film and Video Technology program offers a Career certificate, Technical certificate and/or an Associate of Applied Science Degree.

Simulation and Animation Design

The Simulation and Animation Design program emphasizes the techniques and tools used in game design and the creative design or content of such media. Modern animation skills are developed through hands-on training and professional business outcomes. Also included is in-depth analysis and training in three-dimensional animation skills, both for entertainment and industrial applications. The program prepares students for high wage high demand entry level employment in the entertainment media production field. The Simulation and Animation Design Technology program offers a Career certificate, Technical certificate and/or an Associate of Applied Science Degree.

SUGGESTED COURSE SEQUENCE

FILM AND VIDEO TECHNOLOGY ACCELERATED PATHWAY CREDENTIAL

Course Number	Course Name	Semester Credit Hours	SCH Breakdown			Total Contact Hours	Contact Hour Breakdown		
			Lecture	Lab	Clinical/ Internship		Lecture	Lab	Clinical/ Internship
ETT 1013	Introduction to Entertainment Media Industry	3	3			45	45		
ETT 1213	Digital Imaging and Editing	3	2	2		60	30	30	
FVT 1213	Grip and Electrical	3	2	2		60	30	30	
FVT 1613	Production Skills	3	2	2		60	30	30	
FVT 2713	Set Construction or Approved Elective	3	2	2		60	30	30	
	Total	**15**	**11**	**8**		**285**	**165**	**120**	

FILM AND VIDEO TECHNOLOGY CAREER CERTIFICATE

Course Number	Course Name	Semester Credit Hours	SCH Breakdown			Total Contact Hours	Contact Hour Breakdown		
			Lecture	Lab	Clinical/ Internship		Lecture	Lab	Clinical/ Internship
ETT 1013	Introduction to Entertainment Media Industry	3	3			45	45		
ETT 1213	Digital Imaging and Editing	3	2	2		60	30	30	
ETT 2112	Audio Design and Production	2	1	2		45	15	30	
FVT 1114	Editing I	4	2	4		90	30	60	
FVT 1213	Grip and Electrical	3	2	2		60	30	30	
FVT 1314	Camera and Lighting I	4	2	4		90	30	60	
FVT 1613	Production Skills	3	2	2		60	30	30	
FVT 2613	Assistant Directing	3	2	2		60	30	30	
FVT 2713	Set Construction or Approved Elective	3	2	2		60	30	30	
LLS 1312	Orientation	2	2			30	30		
	Total	**30**	**20**	**20**		**600**	**300**	**300**	

FILM AND VIDEO TECHNOLOGY TECHNICAL CERTIFICATE

Course Number	Course Name	Semester Credit Hours	SCH Breakdown			Total Contact Hours	Contact Hour Breakdown		
			Lecture	Lab	Clinical/ Internship		Lecture	Lab	Clinical/ Internship
	Career Certificate	30	20	20		900	300	600	
ETT 2513	Media Portfolio	3		6		90		90	
FVT 2114	Editing II	4	2	4		90	30	60	
FVT 2314	Camera & Lighting II	4	2	4		90	30	60	
FVT 2413	Production and Set Management	3	2	2		90	30	30	
FVT 2711	Script Supervising	1	1			15	15		
	Total	**45**	**27**	**36**		**1275**	**405**	**840**	

General Education Core Courses

To receive the Associate of Applied Science Degree, a student must complete all of the required coursework found in the Career Certificate option, Technical Certificate option and a minimum of 15 semester hours of General Education Core. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college. The Southern Association of Colleges and Schools (SACS) Commission on Colleges Standard 2.7.3 from the Principles of Accreditation: Foundations for Quality Enhancement1 describes the general education core.

Section 2.7.3   In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent. These credit hours are to be drawn from and include at least one course from the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. The courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

Academic Courses for Film and Video Technology

Course Number	Course Name	Semester Credit Hours	SCH Breakdown		Total Credit Hours	Contact Hour Breakdown		Certification Information
			Lecture	Lab		Lecture	Lab	Certification Name
	Humanities/Fine Arts	3						
	Natural Science/Mathematics (MAT 1313 College Algebra*)	3						
	Social/Behavioral Sciences	3						
	Other academic courses per local community college requirements for AAS degree.	6						
TOTAL		**15**						

*MAT 1233 Intermediate Algebra may be taken in lieu of MAT 1313 College Algebra

---

[1]

Southern Association of Colleges and Schools Commission on Colleges. (2012). *The principles of accreditation: Foundations for quality enhancement*. Retrieved from http://www.sacscoc.org/pdf/2012PrinciplesOfAcredition.pdf

SUGGESTED COURSE SEQUENCE

SIMULATION AND ANIMATION ACCELERATED PATHWAY CREDENTIAL

Course Number	Course Name	Semester Credit Hours	SCH Breakdown			Total Contact Hours	Contact Hour Breakdown		
			Lecture	Lab	Clinical/ Internship		Lecture	Lab	Clinical/ Internship
IMT 1114	History of Gaming	4	3	2			45	30	
IMT 1214	Game Theory & Mechanics	4	3	2			45	30	
IMT 1313	Video Game Programming I	4	2	4			30	60	
ETT 1223	Illustration and Artistic Rendering	3	2	2			30	30	
	Total	**15**	**10**	**10**		**300**	**150**	**150**	

SIMULATION AND ANIMATION CAREER CERTIFICATE

Course Number	Course Name	Semester Credit Hours	SCH Breakdown			Total Contact Hours	Contact Hour Breakdown		
			Lecture	Lab	Clinical/ Internship		Lecture	Lab	Clinical/ Internship
ETT 1223	Illustration and Artistic Rendering	3	2	2		60	30	30	
IMT 1114	Introduction to 3D Modeling	3	2	2		60	30	30	
IMT 1214	Game Theory & Mechanics	4	3	2		75	45	30	
IMT 1313	Video Game Programming I	3	2	2		60	30	30	
IMT 1414	Photography for Games	4	3	2		75	45	30	
IMT 1513	Introduction to 3-D Modeling	3	2	2		60	30	30	
IMT 1523	Intermediate 3-D Modeling	3	2	2		60	30	30	
IMT 1613	Advanced 3-D Modeling	3	2	2		60	30	30	
RST 1312	Freshman Orientation	2	2			60	30	30	
	Total	**30**	**18**	**14**		**570**	**300**	**270**	

13

SIMULATION AND ANIMATION TECHNICAL CERTIFICATE

Course Number	Course Name	Semester Credit Hours	SCH Breakdown			Total Contact Hours	Contact Hour Breakdown		
			Lecture	Lab	Clinical/ Internship		Lecture	Lab	Clinical/ Internship
	Career Certificate	30	18	14		750	270	480	
IMT 2113	Video Game Programming II	3	2	2		90	30	30	
IMT 2213	Marketing for Game Design	3	2	2		90	30	30	
IMT 2312	Business of Game Development	2	1	2		75	15	30	
IMT 2413	Animation and Simulation Design Seminar and Experience	3	1	4		135	15	60	
IMT 2512	Game Evaluation	2		2		60		30	
IMT 2612	Audio Design and Production for Animation Simulation	2	1	2		75	15	30	
	Total	**45**	**25**	**28**		**1065**	**375**	**690**	

General Education Core Courses

To receive the Associate of Applied Science Degree, a student must complete all of the required coursework found in the Career Certificate option, Technical Certificate option and a minimum of 15 semester hours of General Education Core. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college. The Southern Association of Colleges and Schools (SACS) Commission on Colleges Standard 2.7.3 from the Principles of Accreditation: Foundations for Quality Enhancement2 describes the general education core.

Section 2.7.3   In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent. These credit hours are to be drawn from and include at least one course from the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. The courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

2

Southern Association of Colleges and Schools Commission on Colleges. (2012). *The principles of accreditation: Foundations for quality enhancement.* Retrieved from
http://www.sacscoc.org/pdf/2012PrinciplesOfAcreditation.pdf

Academic Courses for Film and Video Technology

Course Number	Course Name	Semester Credit Hours	SCH Breakdown		Total Credit Hours	Contact Hour Breakdown		Certification Information
			Lecture	Lab		Lecture	Lab	Certification Name
	Humanities/Fine Arts	3						
	Natural Science/Mathematics (MAT 1313 College Algebra*)	3						
	Social/Behavioral Sciences	3						
	Other academic courses per local community college requirements for AAS degree.	6						
TOTAL		**15**						

*MAT 1233 Intermediate Algebra may be taken in lieu of MAT 1313 College Algebra

CAREER CERTIFICATE REQUIRED COURSES (FILM & VIDEO TECHNOLOGY)

Course Number and Name: ETT 1013   Introduction to Entertainment Media Industry

Classification: Career/Technical Core

Description: This course introduces the film and video industry, careers in the fields, and basic terms and vocabulary used in the industry.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3		45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explain the history of the entertainment media industry.
    a. Discuss the beginnings and evolution of the entertainment media industry.
    b. Describe how changing technology is impacting the entertainment media industry.
    c. Summarize how the history of entertainment media is related to the industry today.

2. Analyze various careers and their job descriptions in audio/video technology and film.
    a. Discuss the responsibilities of producers, including budgets, schedules, personnel, and tracking progress.
    b. Describe the responsibilities of directors, including knowledge of story structure, script analysis, the relationship to the production team, and the responsibilities of crewmembers.
    c. Describe the duties of editors for audio, video, and film productions.
    d. Discuss the duties of editors related to audio and visual effects.
    e. Describe various jobs associated with animation including communications, video and feature-length productions, and Internet streaming.
    f. Discuss the responsibilities of others in this field including lighting directors, cinematographers, videographers, sound engineers, stunt coordinators, special effects coordinators, productions specialists, and other crewmembers.

3. Explain the value of having a broad general knowledge of fine arts and cultural and regional diversity.
    a. Identify various types of audio and visual approaches that convey information or create an emotional impact.
    b. Explain how knowledge is useful in dealing with projects covering a broad spectrum of events, regions, or cultures when research may not be possible.
    c. Define the terminology associated with audio/video technology and film production.

Course Number and Name: **ETT 1213   Digital Imaging and Editing**

Classification: Career/Technical Core

Description: This course provides knowledge of the tools required to create graphic images and understand the most commonly used image editing concepts and terminology. Hands-on activities, collaborative learning and lecture are combined to provide participants a well-rounded project based program.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Identify and discuss industry standard image manipulation software.
   a.   Describe the types of tools required for image capture and manipulation.
   b.   Discuss the various tools palette needed to edit images and color correction.
   c.   Discover how to adjust image resolution and size for a given project.

2.   Explain how to create graphics for titles and backgrounds.
   a.   Identify layering techniques.
   b.   Identify the various tools palette needed to edit images and color correction.
   c.   Explain how to adjust image resolution and size for a given project.

3.   Learn how to import and export files.
   a.   Learn the principles and formats of file compression.
   b.   Learn about the application of various saved file formats.

Course Number and Name: **ETT 2112**   **Audio Design and Production**

Classification: Career/Technical Core

Description: Students will build basic skills for recording and delivering quality audio in field and location environments through an understanding of audio interfaces, mixers and microphones. Specific focus will be on audio production on a video or film set as well various multiple sound source environments.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	1	2	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate knowledge of basic tools and equipment used in audio field production.
   a. Describe the types, pick-up patterns, and use of various microphones used in typical field recording conditions.
   b. Employ knowledge regarding audio equipment used for productions including basic recording equipment, equalizers, mixing.
   c. Illustrate the techniques required for synchronization of audio with video and multiple sound tracks.
   d. Describe typical audio recording equipment used for field production.
   e. Describe the advantages and disadvantages of single and double system sound in the film and television environment.

2. Demonstrate the proper use of field equipment to capture field audio for film and television.
   a. Demonstrate the proper setup and operation of a shotgun microphone.
   b. Demonstrate the proper setup and operation of a wireless lavalier microphone.
   c. Demonstrate the proper setup and operation of an omnidirectional microphone.

3. Demonstrate the proper use of field audio recording equipment.
   a. Demonstrate setting and adjusting established industry standard recording levels for field recording.
   b. Demonstrate proper film and television set protocol and procedures for field recording.
   c. Complete industry required paperwork for effective post-production workflow.

4. Design an audio production.
   a. Apply knowledge of the critical elements in designing a production to activities in the pre-production stage.
   b. Identify the basic functions and resources for editing an audio production.
   c. Apply computer-based development in audio production and editing, with an emphasis on digital technology.

Course Number and Name: **FVT 1114**   **Editing I**

Classification: Career/Technical Core

Description: This course covers the editing workflow and organizational skills in the digital environment using non-linear editing software. Topics include terminology, technologies, project workflow, basic sound and editing skills, and an understanding of output formats sound and picture editing skills. Upon completion, students should be able to demonstrate proficiency in using editing equipment, organizing project materials, local area network storage, and project collaboration.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate assistant editor organizational skills and basic knowledge of editing in the digital environment using non-linear editing software.
    a. Define terms associated with editing in the digital environment using non-linear editing software.
    b. Identify non-linear editing software used in the digital environment.
    c. Identify editing equipment.
    d. Explain project workflow.

2. Demonstrate proficiency in using editing equipment in the digital environment to complete project.
    a. Properly set up project to established editing workflow.
    b. Import project media into established project.
    c. Organize project media for efficient workflow.
    d. Find and import music and sound effects to enhance project.

3. Efficiently export sequence for distribution.
    a. Export sequence for online distribution.
    b. Export sequence to disc recording software.
    c. Properly create a recorded disc for distribution.

Course Number and Name: **FVT 1213   Grip and Electrical I**

Classification: Career/Technical Core

Description: This course covers various grip and electrical and support packages used in different environments for studio and location. Topics include production support equipment, lighting instruments, hardware, stands, light modifiers, and electrical theory with emphasis on safety. Upon completion, students should be able to execute basic grip and electrical directions given by the key grip, and/or gaffer.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Discuss and demonstrate grip and lighting equipment used in a studio and on location.
      a.   Identify grip and lighting equipment used in a studio and on location.
      b.   Demonstrate the proper use of grip and lighting equipment used in a studio and on location.

2.   Discuss and demonstrate knowledge of grip and electrical department hierarchy.
      a.   Describe the responsibilities of the key, grip, and gaffer.
      b.   Interpret key grip and gaffer terminology.
      c.   Execute basic grip and electrical directions given by the key grip, and/or gaffer.
      d.   Demonstrate knowledge of basic budget and rental procedures.

3.   Demonstrate proper storage and maintenance of grip and electrical equipment.
      a.   Demonstrate proper storage and maintenance of light instruments
      b.   Demonstrate proper storage and maintenance of electrical power distribution materials.
      c.   Demonstrate proper storage and maintenance of grip equipment.

Course Number and Name: FVT 1314   Camera and Lighting I

Classification: Career/Technical Core

Description: This course covers the basic principles of video camera and recorder operations in professional formats, crew protocol and safety, and basic lighting theory and application. Emphasis is placed on terminology, organizational skills, assistant camera responsibilities, the characteristics of light, basic lighting procedures, and proper procedures of field recording with video equipment. Upon completion, students should be able to demonstrate an understanding of the basic technical terms of camera operation, video recording, and lighting equipment.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Understand the basic principles of digital camera and recorder operation in professional formats.
    a. Describe the responsibilities of each member of the camera department.
    b. Properly identify and use essential equipment used by the assistant cameraman.
    c. Demonstrate an understanding of basic technical terms used in the operation of camera and video equipment.

2. Demonstrate job duties of a second assistant cameraman.
    a. Demonstrate proper setup of camera and support equipment in a timely manner.
    b. Demonstrate various techniques used to mark talent location within a camera shot.
    c. Demonstrate proper slate setup and use.
    d. Complete essential paperwork needed for production.

3. Demonstrate proper storage and maintenance of camera and video equipment.
    a. Demonstrate proper storage and maintenance of camera body.
    b. Demonstrate proper storage and maintenance of camera support equipment.
    c. Demonstrate proper storage and maintenance of camera lenses.

4. Learn terminology and use of basic lighting equipment.
    a. Demonstrate proper setup and storage of lighting equipment.
    b. Demonstrate basic lighting schemes.

Course Number and Name:	FVT 1613 Production Skills

Classification: Career/Technical Core

Description: This course introduces the terminology, equipment, forms, responsibilities, and safety measures needed to fill the role of a production assistant. Job responsibilities of various other production departments will also be covered.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Understand common film set terminology.
    a.   Define common film set terminology.

2.   Discuss equipment used on a film set.
    a.   Identify the equipment used on a film set.
    b.   Explain the purpose of each piece of equipment.

3.   Discuss the various forms used in production.
    a.   Explain how forms are used for organization and legal security.
    b.   Explain the purpose of common forms used on a film set.

4.   Discuss safety on the film set.
    a.   Explain the importance of enforcing appropriate safety precautions on the set.
    b.   Relate good safety practices to reputation and professionalism.
    c.   Identify safety measures taken before, during, and after a shoot.
    d.   Identify safety concerns associated with working with talent.

5.   Discuss the key support positions on a film set.
    a.   Examine the various departments and discuss their place in the film industry.
    b.   Discuss the various jobs and how they fit into the filmmaking process.
    c.   Identify skills and training required to work as an assistant in the various set production departments.

Course Number and Name: FVT 2613   Assistant Directing

Classification: Career/Technical Core

Description: In this course students will demonstrate the principles of organizing and managing the personnel of a film or video production. Legal responsibilities, proper paperwork, associated software, and managerial skills will be covered in the class.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Learn the organizational structure of set production.
    a. Learn the duties of the assistant director.
    b. Learn the duties of the 2nd assistant director.
    c. Learn the duties of the 2^{nd,} 2nd assistant director.

2. Learn the pre-production duties of an assistant director.
    a. Demonstrate the organizational skills needed for pre-production.
    b. Break down a script for pre-production scheduling.
    c. Create production shooting schedule using industry standard software.
    d. Create "Day out of Days" schedule for actors.

3. Learn the production duties of an assistant director.
    a. Prepare a call sheet for daily production.
    b. Demonstrate ability to efficiently organize daily work schedule.
    c. Demonstrate assistant director set protocol.
    d. Learn the essential paperwork needed for extras and actors.
    e. Create and detail the purpose of Daily Production Reports.

Course Number and Name: FVT 2713 Set Construction

Classification: Career/Technical Core

Description: This course provides the fundamentals needed for the construction of sets for Film & TV. The use of unique materials, construction, and finishing skills will be explored. Hands-on experience in the creation of set design, which follows film industry standards and work rules, will be provided.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Identify and demonstrate essential safety in a working environment.
   a. Demonstrate proper use of safety equipment.
   b. Demonstrate knowledge of basic first aid procedures.
   c. Demonstrate safe handling of tools.

2. Understand how to identify various lumber materials.
   a. Discuss the basic properties of wood.
   b. Select the type of wood for the project.

3. Identify and demonstrate the proper use of basic tools and equipment used in movie set construction.
   a. Use and maintain power tools effectively.
   b. Use and maintain cordless tools effectively.
   c. Use measuring tools effectively.

4. Complete the construction of basic studio components.
   a. Construct a set flat.
   b. Construct a wall jack.
   c. Construct an apple box.

TECHNICAL CERTIFICATE REQUIRED COURSES (FILM & VIDEO TECHNOLOGY)

Course Number and Name: FVT 2114   Editing II

Classification: Career/Technical Core

Description: This course covers advanced editing practices in the digital environment using non-linear editing software. Topics include terminology, technologies, project workflow, advanced sound and editing skills, and an understanding of output formats. Upon completion, students should be able to demonstrate proficiency in using editing equipment, local area network storage, and project collaboration.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate proper skills to work as an editor for film and/or television production.
    a.   Cut shot sequences to different angles at specific points in scenes.
    b.   Select and combine the most effective shots of each scene in order to form a logical and smoothly running story.
    c.   Mark frames where a particular shot or piece of sound is to begin or end.
    d.   Verify key numbers and time codes on materials.
    e.   Organize and string together raw footage into a continuous whole according to scripts and/or the instructions of directors and producers.
    f.   Review assembled films or edited videotapes on screens or monitors in order to determine if corrections are necessary.
    g.   Review footage sequence by sequence in order to become familiar with it before assembling it into a final product.
    h.   Set up and operate computer editing systems, electronic titling systems, video switching equipment, and digital video effects units in order to produce a final product.
    i.   Manipulate plot, score, sound, and graphics to make the parts into a continuous whole.
    j.   Discuss the sound requirements of pictures.

2.   Demonstrate knowledge of editing in the digital environment using non- linear editing software.
    a.   Define advanced terms associated with editing in the digital environment using non-linear editing software.
    b.   Identify non-linear editing software used in the digital environment.
    c.   Identify editing equipment.
    d.   Explain project workflow.

3.   Demonstrate proficiency in using editing equipment in the digital environment to complete a project.
    a.   Use non-linear editing software to complete an editing project.
    b.   Organize information correctly on a local area network.
    c.   Synchronize double-system audio and video elements
    d.   Collaborate with others on an editing project.
    e.   Enhance scene mood by adding sound effects and music.
    e.   Output project sequence for mass distribution.

Course Number and Name: **FVT 2314   Camera and Lighting II**

Classification: Career/Technical Core

Description: This course offers advanced principles of video camera and recorder operations and introduces students to film formats and equipment as well as advanced lighting theory applications. Emphasis is placed on first assistant and operator responsibilities, terminology, lighting for effect, and color correction. Upon completion, students should be able to demonstrate an understanding of camera terms and equipment, lighting theory and applications, and assist on studio and location shoots.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Understand the basic principles of digital camera and recorder operation in professional formats.
    a. Describe the responsibilities of each member of the camera department.
    b. Properly identify and use essential equipment used by the assistant cameraman.
    c. Demonstrate an understanding of basic technical terms used in the operation of camera and video equipment.

2. Demonstrate job duties of a first assistant cameraman.
    a. Demonstrate proper setup of advanced camera and support equipment in a timely manner.
    b. Demonstrate proper equipment use and techniques for obtaining camera focus.
    c. Demonstrate adjusting camera settings dictated by director of photographer.

3. Demonstrate proper storage and maintenance of advanced camera and video equipment.
    a. Demonstrate proper storage and maintenance of advanced camera body.
    b. Demonstrate proper storage and maintenance of advanced camera support equipment.
    c. Demonstrate proper storage and maintenance of advanced camera lenses.

4. Learn terminology and use of basic lighting equipment.
    a. Demonstrate proper setup and storage of advanced lighting equipment.
    b. Demonstrate advanced lighting schemes.

Course Number and Name: **FVT 2413   Production and Set Management**

Classification: Career/Technical Core

Description: This course provides an analysis of procedures and problems in preparing a script for film or television production. Emphasis is on the role of the production coordinator in breaking down scripts, and scheduling pre-production, production, and post-production.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Learn the hierarchy of production and set management.
    a. Learn the duties of individual members of production management.
    b. Describe the duties of a production manager.
    c. Describe the duties of a production coordinator.

2. Demonstrate knowledge of production manager duties.
    a. Detail steps needed to establish a production office.
    b. Detail office rooms and office equipment needed for efficiency.
    c. Detail essential paperwork workflow.
    d. Describe producer and studio requirements from the production office.

3. Demonstrate knowledge of set requirements from the production office.
    a. Describe creation and distribution of script sides.
    b. Describe creation and distribution of call sheets.
    c. Detail distribution of paperwork to upper management.

4. Discuss the steps needed to close production office.
    a. Describe steps needed to close out accounts.
    b. Describe steps needed for post production.

Course Number and Name: **ETT 2513   Media Portfolio I**

Classification: Career/Technical Core

Description: This capstone class is the culmination of lessons learned in previous and present courses leading to the creation of final projects for job submissions. The student will originate a minimum of two projects and take them through the standard process of pre-production, production, editing, and final distribution.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3		6	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Conceptualize a short project and take the project through pre-production.
    a.   Demonstrate organizational skills needed to begin production.
    b.   Go through the selection of crew members for efficient production.
    c.   Document script breakdown procedure and generate essential paperwork for each department.
    d.   Demonstrate location selections based on project and production department needs.
    e.   Generate all necessary production department legal forms necessary for effective production.

2.   Complete all phases of production for necessary project completion.
    a.   Organize the shooting day for efficient production.
    b.   Create a series of daily call sheets.
    c.   Generate "sides" for the actors and essential crew members.
    d.   Create necessary and legal documentation for effective production.
    e.   Demonstrate effective managerial skills through the completion of the project.

3.   Finalize project for distribution.
    a.   Demonstrate collaborative skills working with an editor.
    b.   Organize all necessary project paperwork for distribution.
    c.   Create various output formats of final project for internet and personal distribution.

Course Number and Name: FVT 2711   Script Supervising

Classification: Career/Technical Core

Description: This course examines the role of the script supervisor in film production. Content emphasizes the importance of continuity for productions, script timing, reporting, script breakdown, and other tools of the trade.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	1		15

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Discuss the importance and job duties of a script supervisor during production.
    a. Analyze the relationship between director and script supervisor.
    b. Identify the relationship between production staff and script supervisor.
    c. Discuss the relationship between the editor and script supervisor.

2. Demonstrate pre-production duties of a script supervisor.
    a. Discuss tools and supplies needed for the job.
    b. Discuss integration of script changes and impact to production.
    c. Create a Master Break Down log of the script.
    d. Discuss paperwork distribution with production.

3. Learn script supervisor production duties.
    a. Demonstrate how to properly "Line a Script" during rehearsal.
    b. Demonstrate how to complete "Left or Facing Pages" during production shooting.
    c. Learn how to properly label takes and relay information to essential departments.
    d. Prepare daily paperwork for the production department and the editorial department.

TECHNICAL ELECTIVE COURSES (FILM & VIDEO TECHNOLOGY)

Course Number and Name: ETT 1223   Digital Illustration and Artistic Rendering

Classification: Technical Elective

Description: In this course students will understand and apply the elements of visual design and demonstrate the use of illustration software.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate a working knowledge of illustration and artistic rendering.
   a.   Apply the elements of visual design.
   b.   Apply the basic principles and methods of drawing used in digital and graphic design.
   c.   Apply the basic principles, techniques, and media used in digital and traditional illustration styles.
   d.   Use illustration software for illustration and artistic rendering.
   e.   Practice and apply the different theories of form and composition.
   f.   Demonstrate vector drawing and painting tools and apply their use appropriately.
   g.   Apply the design/creative process to a 'real world" project.
   h.   Draw accurately and freely with Pen tool.
   i.   Create original illustrations with comprehensive layer control, gradients, blends and other Adobe Illustrator tools.
   j.   Utilize the software tools to create special effects.
   k.   Manipulate image integration and rasterization elements.
   l.   Generate cross platform and broad-based file format support.

Course Number and Name: ETT 2523 Media Portfolio II

Classification: Technical Elective

Description: This class is the culmination of lessons learned in previous and present courses leading to the creation of a final project for job submissions. The student will originate an advance project taking it through the standard process of pre-production, production, editing, and final distribution.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3		6	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Conceptualize a project and take the project through pre-production.
   f. Demonstrate organizational skills needed to begin production.
   g. Go through the selection of crew members for efficient production.
   h. Document script breakdown procedure and generate essential paperwork for each department.
   i. Demonstrate location selections based on project and production department needs.
   j. Generate all necessary production department legal forms necessary for effective production.

2. Complete all phases of production for necessary project completion.
   f. Organize the shooting day for efficient production.
   g. Create a series of daily call sheets.
   h. Generate "sides" for the actors and essential crew members.
   i. Create necessary and legal documentation for effective production.
   j. Demonstrate effective managerial skills through the completion of the project.

3. Finalize project for distribution.
   a. Demonstrate collaborative skills working with an editor.
   b. Organize all necessary project paperwork for distribution.
   c. Create various output formats of final project for internet and personal distribution.

Course Number and Name: FVT 1122   History of Film

Classification: Technical Elective

Description: This course explores the history of cinema through the study of narrative and non- narrative works from the silent-film era to the present day.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2		30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate an understanding of the history and development of World and American cinema.

2.   Explore landmark films and technologies that have shaped and defined the development of specific genres and/or the film industry as a whole.

3.   Analyze the impact of film on today's society.

Course Number and Name: **FVT 1413   Screenwriting Fundamentals**

Classification: Technical Elective

Description: This course is an introduction to the building blocks upon which all film and television writing is based: visualization, dialogue, scenes, sequences, and basic dramatic structure. Students begin with writing exercises and proceed to the development of several short scripts using industry standard format.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Learn the basic structure of a script.
      a.   Learn the various script formats for television and film.
      b.   Discuss the technical differences between spec and production scripts.

2.   Develop script formatting skills.
      a.   Discuss the development of single camera script formatting for film.
      b.   Discuss and develop multi-camera script formatting for television.

3.   Learn the fundamentals of story structure, character development, and dialogue.
      a.   Discuss the basic 3-Act story structure and development of subplots.
      b.   Learn how to write action/description
      c.   Learn about character development and appropriate dialogue.

Course Number and Name: **FVT 2123**   **Editing III: Independent Commercial Video Production**

Classification: Technical Elective

Description: This course continues advanced instruction in editing techniques with emphasis on settings for commercial distribution. Students will collaborate on a practical project.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	1	4	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate the proper skills to work as an assistant director for film and television production.
   a. Cut shot sequences to different angles at specific points in scenes.
   b. Select and combine the most effective shots of each scene in order to form a l logical and smoothly running story.
   c. Mark frames where a particular shot or piece of sound is to begin or end.
   d. Verify key numbers and time codes on materials.
   e. Organize and string together raw footage into a continuous whole according to scripts and/or the instructions of directors and producers.
   f. Review assembled films or edited videotapes on screens or monitors in order to determine if corrections are necessary.
   g. Review footage sequenced by sequence in order to become familiar with it before assembling it into a final product.
   h. Set up and operate computer editing systems, electronic titling systems, video switching equipment, and digital video effects units in order to produce a final product.
   i. Manipulate plot, score, sound, and graphics to make the parts into a continuous whole.
   j. Discuss the sound requirements of pictures.

2. Demonstrate knowledge of editing in the digital environment using non-linear editing software.
   a. Define advanced terms associated with editing in the digital environment using non linear editing software.
   b. Identify non linear editing software used in the digital environment.
   c. Identify editing equipment.
   d. Explain project workflow.

3. Demonstrate proficiency in using editing equipment in the digital environment to complete a project.
   a. Use non linear editing software to complete an editing project.
   b. Organize information correctly on a local area network.
   c. Synchronize double system audio and video elements.
   d. Collaborate with others on an editing project.
   e. Enhance scene mood by adding sound effects and music.
   f. Output project sequence for mass distribuition.

Course Number and Name: **FVT 2133   Video Compositing and Special Effects**

Classification: Technical Elective

Description: This course teaches the student to use advanced compositing and editing software, and plug-ins to achieve photo-realism in feature film and video digital effects.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. The student will learn the history of special effects and digital.
   a. The student will learn about the creation and impact of special effects in the early movie industry.
   b. The student will learn about the use of computers in digital compositing and special effects.
   c. The student will learn about the future of digital special effects.

2. The student will learn to make a good digital composite.
   a. Demonstrate how to pull a matte from different situations.
   b. Demonstrate how to refine a matte.
   c. Demonstrate how to composite computer graphic images.
   d. Demonstrate how image blending works to integrate images.

3. The student will learn how to realistically match individual images to create a single image.
   a. Match the light space between the composite layers.
   b. Match the camera attributes between the composite layers.
   c. Match the action between the composite layers.

Course Number and Name: **FVT 2833   Aerial Camera Operations**

Classification: Technical Elective

Description: This course covers the proper set up and operation of specialized camera equipment used on aerial platforms for film and video use. Emphasis will be placed on camera operation and shot composition.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Set up a camera within the limitations of the aerial platform.
        a.   Gain knowledge of the FAA rules and regulations regarding UAS.
        b.   Equip the camera following federal guidelines.
        c.   Communicate with the UAS operator.

2.   Adapt the camera for UAS use.
        a.   Diagnose and correct camera operation problems.
        b.   Download footage from the camera.

3.   Interpret camera movement and composition given by the director.
        a.   Demonstrate a working knowledge of camera movement.
        b.   Demonstrate a working knowledge of camera composition.

4.   Communicate with the unmanned aerial vehicle operator.
        a.   Develop a working knowledge of aerial terminology.

Course Number and Name: **FVT 2513   Motion Capture and Visual Effects**

Classification: Technical Elective

Description: This course provides a survey of motion capture and virtual production concepts and technologies. It focuses on the optical motion capture pipeline for recording, real-time retargeting and post-processing of full body human motion and props. Students are encouraged to develop their own methods and processes for experimenting with capturing and remapping motion as well as write about their work.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate knowledge of image editing software.

2.   Demonstrate knowledge of motion capture data.
        a.   Understand the history of motion capture and current contexts of application.
        b.   Understand the technology and process of optical motion capture.
        c.   Develop an understanding of virtual production paradigm.

3.   Demonstrate knowledge of managing a performance.
        a.   Develop the skills to direct an effective motion capture session.
        b.   Acquire working knowledge of software used in capturing and processing data.
        c.   Acquire working knowledge of motion editing.
        d.   Apply motion capture data in a way relevant to their field.

Course Number and Name: **FVT 2623   Directing for the Screen**

Classification: Technical Elective

Description: This course will teach the basic fundamentals of screen directing, which includes script breakdown, scene blocking, communication with cast and crew, and the logistics of production.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Break down the story and dialogue in a scene.

2.   Pre-visualize the script for purposes of shot design and or style.

3.   Understand set logistics and the role of the director in set management.

4.   Communicate and work with actors and crew.

5.   Block a scene with actors and for the camera.

6.   Capture and covering a scene effectively.

7.   Edit footage together effectively from an intended design.

8.   Critically analyze approach, story, and style in terms of film directing.

Course Number and Name: **FVT 2723   Set Construction II**

Classification: Technical Elective

Description: This course offers advanced skills for the construction of sets for Film & TV. Hands-on experience in advanced set construction will be provided. Cost analysis and proper budgeting skills will be covered.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Identify and demonstrate the proper use of specialized tools and equipment used in movie set construction.

2.   Interpret and execute production designer set drawings.

3.   Determine the supplies needed to complete a project.

4.   Develop the necessary skills to budget and order supplies for completion of project.

Course Number and Name: **FVT 2813   Business Aspects of Film and Television Production**

Classification: Technical Elective

Description: This course covers the fundamentals of budgeting, financial records, and the distribution and marketing of films. (The course will introduce the fundamentals of budgeting, financial records, and the distribution of films. Starting with a brief historical review of the American film industry, the course will describe the major film corporations and their subsidiaries and the rise of the independent film industry. Additional topics include basic accounting issues, marketing concepts, distribution, advertising, the Internet, publicity, finding a distribution partner, negotiation tactics and strategies, and establishing a "paper trail" for financial transactions.)

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Learn the history of the American film industry.
    a. Learn about the studio system of filmmaking.
    b. Learn about the independent system of filmmaking.

2. The student will develop a marketing plan for a new film in production.
    a. Identify and define terminology associated with motion picture and television production advertising, marketing, and release.
    b. Demonstrate knowledge of motion picture marketing techniques.
    c. Demonstrate knowledge and ability to write a motion picture news release.

3. Demonstrate knowledge of basic motion picture and television business accounting procedures.
    a. Demonstrate knowledge of finance acquisition.
    b. Demonstrate knowledge of finance distribution.
    c. Demonstrate knowledge of industry standard accounting software.

4. Demonstrate knowledge of motion picture releasing and distribution techniques.
    a. Demonstrate knowledge of production company business plan development.
    b. List, define and demonstrate knowledge of television and motion picture releasing and distribution techniques.
    c. Demonstrate knowledge and ability to construct MPAA style approved press releases.

CAREER CERTIFICATE REQUIRED COURSES (SIMULATION & ANIMATION)

Course Number and Name: ETT 1223   Illustration and Artistic Rendering

Classification: Career/Technical Core

Description: In this course students will understand and apply the elements of visual design and demonstrate the use of illustration software.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate a working knowledge of illustration and artistic rendering.
   a.   Apply the elements of visual design.
   b.   Apply the basic principles and methods of drawing used in digital and graphic design.
   c.   Apply the basic principles, techniques, and media used in digital and traditional illustration styles.
   d.   Use illustration software for illustration and artistic rendering.

Course Number and Name: **IMT 1114   Introduction to Animation and Simulation Design**

Classification: Career/Technical Core

Description: This course identifies the foundation skills necessary in the game design industry. Content such as safety, ethical issues, video game history, career opportunities, game mechanics, and photography is offered to students. Students will get an overview of the principles of animation.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Identify and determine funding for potential production projects.
        a.   Demonstrate knowledge of budgeting software.
        b.   Demonstrate knowledge of post production.
        c.   Demonstrate knowledge of legal aspects of film production.

2.   Identify potential markets and target audiences for distribution.

43

Course Number and Name: **IMT 1214   Game Theory and Mechanics**

Classification: Career/Technical Core

Description: Students will learn the theory related to game design and development, the applications associated with game design and the elements and trends in game design. Students will apply design principles and techniques in the creation of user interface and understand the "rules of play."

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	3	2	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Analyze software and hardware used in game design.
        a.   Examine digital animation tools, capabilities, and interface elements, such as those in Adobe After Effects.
        b.   Apply elements and principles of design using computer software.

2.   Demonstrate knowledge of design principles and techniques.
        a.   Discuss current trends in game design.
        b.   Explain the core concepts of "rules of play."
        c.   Apply design principles and techniques in the creation of user interface

Course Number and Name: **IMT 1313   Video Game Programming I**

Classification: Career/Technical Core

Description: In this course students will develop a basic understanding of the C++ programming language and how it relates to the game development process.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Analyze the structure of the C++ language.
    - a.   Define C++ programming terms.
    - b.   Explain the program development cycle to include input/output, processing, and storage.
    - c.   Convert binary code to decimals.
    - d.   Construct an algorithm for computer programming technology.
    - e.   Demonstrate screen output using the C++ language.
    - f.   Classify variable and constants.
    - g.   Create programs that perform calculations using arithmetic operations to include addition, subtraction, multiplication, division, and exponentiation.
    - h.   Create programs that include decision, selection, and iteration statements to include IF/THEN statements, Case statements, Do loops, and For/Next loops.
    - i.   Create programs that use array/table structures.
    - j.   Create, run, and debug an original program to input data, process data, and print a report.

2.   Analyze the purpose, importance, and structure of game engines.
    - a.   Identify the core components of game engines relative to game development.
    - b.   Develop an understanding of the elements of the game design engine.
    - c.   Create game code using a game engine.

Course Number and Name: **IMT 1414   Photography for Games**

Classification: Career/Technical Core

Description: This course will explore image composition and elements of visual design through photography, including the use of photo editing software for manipulation and enhancement of images for use in visual design software.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	3	2	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate knowledge of image composition and elements of visual design through photography.
   a.   Apply art elements and principles, such as composition, color, value, and symmetry to photographic works of art in both traditional and digital photographic media.
   b.   Use photo editing software to manipulate and enhance images for use in visual design software and meet hardware specifications.

Course Number and Name: **IMT 1513**   **Introduction to 3D Modeling**

Classification: Career/Technical Core

Description: In this course students will learn to interact with the design visualization software effectively and productively with the user interface and manage file input and output.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate basic knowledge of design visualization software.
   a.   Discuss software visualization terminology, dimensions, and perspectives.
   b.   Identify types of software visualization.

2.   Interact with the design visualization software effectively and productively.
   a.   Apply and manage correct file input and output.
   b.   Develop efficient work flow between design software and production software.
   c.   Develop non-destructive methods for editing and asset creation.

Course Number and Name: **IMT 1524   Intermediate 3-D Modeling**

Classification: Career/Technical Core

Description: In this course students will learn to set an environment for working with design visualization software and create objects using basic geometry. This course will explore the creative possibilities in object creation, object transformation, object modification, and modeling.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	1	6	105

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Demonstrate ability to set an environment for working with design visualization software and create objects using primitive geometry.
   a.   Analyze menus, tools, and other user interface elements used in creation and editing of geometric objects.
   b.   Create customized work flow for creating new projects and custom toolsets.
   c.   Utilize Perspective and Orthographic views for modeling and modifying objects.
   d.   Apply usage of Nurbs surfaces, polygons, deformers, and sub-components to manipulate models.

2.   Design, create, and analyze geometric visual components of games.
   a.   Apply selection, translation, rotation and scaling to modify geometry and sub-components to create 3d objects.
   b.   Create objects modeled from reference images for authentic simulation.
   c.   Utilize editing tools such as Extrude, Bevel, etc. to manipulate an objects mesh.
   d.   Re-create existing game components from top-tier games for analysis of methods.

3.   Create and manipulate node based materials for shader based texturing and lighting effects.
   a.   Prepare textures for use with 3d objects using photographs and editing software.
   b.   Create various materials using shader combinations and attributes.

Course Number and Name: **IMT 1613   Advanced 3-D Modeling**

Classification: Career/Technical Core

Description: In this course students will gain an understanding of design principles and techniques for use in planning, designing, and producing a game character.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Develop an understanding of the principles and history of Character development and Animation.
    a.   Analyze and discuss the history of animation from its beginning to the modern era.
    b.   Analyze the application of the Principals of Animation and identify their effects.
    c.   Discuss and analyze personality types and archetypes across traditional and interactive media.

2.   Examine the process of Character Development.
    a.   Discuss common character mechanics in games.
    b.   Utilize pre-visualization, model creation, rigging methods, and skin binding to create game-ready characters.
    c.   Create animations using constraints, key frames, timeline, graph editor, and dope sheet, and layers for game production.

3.   Analyze and apply game engine specifications to import game character into an interactive environment for testing and play.
    a.   Discuss different kinds of Game Engines and their platforms
    b.   Create an interactive environment and import assets and character
    c.   Modify game assets for efficiency and performance.

TECHNICAL CERTIFICATE REQUIRED COURSES (SIMULATION & ANIMATION)

Course Number and Name: IMT 2113   Video Game Programming II

Classification: Career/Technical Core

Description: In this course students will develop a basic understanding of the C# programming language, create GUI applications for video games, and analyze the purpose, importance, and structure of game engines.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Analyze the structure of the C# language.
   a.   Define C++ programming terms.
   b.   Explain the program development cycle to include input/output, processing, and storage.
   c.   Convert binary code to decimals.
   d.   Construct an algorithm for computer programming technology.
   e.   Demonstrate screen output using the C# language.
   f.   Classify variable and constants.
   g.   Create programs that perform calculations using arithmetic operations to include addition, subtraction, multiplication, division, and exponentiation.
   h.   Create programs that include decision, selection, and iteration statements to include IF/THEN statements, Case statements, Do loops, and For/Next loops.
   i.   Create programs that use array/table structures.
   j.   Create, run, and debug an original program to input data, process data, and print a report

2.   Analyze the purpose, importance, and structure of game engines.
   a.   Identify the core components of game engines relative to game development.
   b.   Discuss the importance of game engines in the game development process.
   c.   Demonstrate object-oriented design and code reuse patterns and the applications among game developers.
   d.   Develop an understanding of the elements of the game design engine.
   e.   Create game code using a game engine.

Course Number and Name: **IMT 2213   Marketing for Game Design**

Classification: Career/Technical Core

Description: In this course students will identify the company roles and team roles and responsibilities related to the game development process; plan, create, interpret, and analyze budgets for game design and development, and apply time and project-management skills.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Identify the company roles and team roles and responsibilities related to the game development process.
        a.   Describe the elements of leadership and the qualities necessary to become a successful leader.
        b.   Identify the company roles related to the game development process.
        c.   Identify game development team roles involved in the game development process.
        d.   Explain the phases associated with developing a game from concept to completion.
        e.   Explain the Five-Stage Team Management Model and how it can be used in the game development process.
        f.   Explain and demonstrate how to conduct meetings.

2.   Plan, create, interpret, and analyze budgets for game design and development.
        a.   Discuss the elements of a game design budget.
        b.   Plan, construct, interpret, and analyze a game design budget.

3.   Apply time and project-management skills.
        a.   Explain the components of each stage in the game development process.
        b.   Describe the milestones in project management and how they are accomplished.

4.   Communicate with peers, supervisors, and subordinates.
        a.   Explain the communications process.
        b.   Demonstrate active listening skills.

5.   Discuss quality assurance and the role it plays in game design.
        a.   Identify the various stages of quality assurance (QA) for game development.
        b.   Identify best practices regarding quality assurance.

Course Number and Name: IMT 2312   Business of Game Development

Classification: Career/Technical Core

Description: In this course students will explore the importance of audience knowledge and target marketing in game design technology, research consumer behavior and publisher relations within the functions of marketing, such as advertising, public relations, sales, and promotions, and research and analyze the economics of the video game industry.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	1	2	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Explain the importance of audience knowledge and target marketing in game design technology.
   a.   Discuss target markets and how to get a video game sold.
   b.   Explain Demographic segregation and how it can be used in a marketing campaign.
   c.   Describe the marketing tools and how each can be used to attract buyers to a product.
   d.   Compare and contrast the areas of the distribution process.

2.   Research consumer behavior and publisher relations within the functions of marketing, such as advertising, public relations, sales, and promotions.
   a.   Discuss how game companies and publishers work together to bring a game to market.
   b.   Discuss how game companies and publishers work together to bring a game to market.
   c.   Discuss contracts between game companies and publishers.

3.   Research and analyze the economics of the video game industry.
   a.   Discuss the supply chain and how the economy is impacted.
   b.   Investigate cost versus profit for video games.
   c.   Analyze and predict costs and profits for video games.

52

Course Number and Name: **IMT 2312   Business of Game Development**

Classification: Career/Technical Core

Description: In this course students will apply practical video game design mechanics, programming, visual and audio elements, and game production techniques while working in teams.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	1	2	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Apply practical video game design mechanics, programming, visual and audio elements, and game production techniques while working in teams.
   a.   Identify the five phases of idea generation.
   b.   Conduct interviews with possible candidates and/or clients.
   c.   Create a "concept" for the video game.
   d.   Create a game inventory system.
   e.   Create a menu tree.
   f.   Create a block diagram or chart that represents the elements to be created by specific departments.
   g.   Create a video game.

Course Number and Name: IMT 2512   Game Evaluation

Classification: Career/Technical Core

Description: In this course students will explore and understand video game architecture through testing, defect tracking, technical reviews, and inspections and critically evaluate game design, character development, character animation, sound design, playability, and compatibility.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2		30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explore and understand video game architecture through testing, defect tracking, technical reviews, and inspections.
    a. Identify the elements of game architecture and the evaluation process.
    b. Explain the process of bug testing.
    c. Explain bug fixing.

2. Critically evaluate game design, character development, character animation, sound design, playability, and compatibility.
    a. Classify the testing priority of elements of game design, character development and animation, sound design, playability, and compatibility.
    b. Design and develop a video game evaluation plan.
    c. Demonstrate the process of correcting game problem areas and satisfying quality assurance requirements.

Course Number and Name: **IMT 2612   Audio Design and Production for Animation and Simulation**

Classification: Career/Technical Core

Description: This course covers the functions of audio design fundamentals, interactive audio, and the fundamentals of 3-D audio in order to blend video game audio elements.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	1	2	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1.   Research audio history and theory.
        a.   Discuss the components of audio and game design.
        b.   Discuss the history of audio components and their importance in game design.

2.   Understand the functions of audio design fundamentals (creating the atmosphere) and interactive audio for game design.
        a.   Describe how sound can set the mood for a game.
        b.   Create digital sound effects.

RECOMMENDED TOOLS AND EQUIPMENT

Film & Video Technology

Capitalized Items

1.   Canon 5D mk3 DSLR, Canon Cinema EOS, or comparable camera and assorted support equipment
2.   Canon EF Cinema Prime Lens Kit or Zeiss CP lens kit
3.   Zacuto Recoil rig and assorted accessories
4.   Sachtler FSB-8 Tripod
5.   7" on camera external monitor
6.   Rode NTG-2 shotgun microphone kit
7.   Sennheiser ew 112 lavalier system
8.   Zoom H6 recorder
9.   Arri 5-Light Kit
10.   Kino Flo kit
11.   1 x 1 Lite Panels light
12.   Matthews Scrim and Flag Kit
13.   4' x 4' butterfly set
14.   Mac Pro or PC Workstation computer

Non-Capitalized Items

1.   25' and 50' electric extension cables
2.   C-stands
3.   Assorted light gels
4.   SOFTWARE-- AVID or Premiere, Photoshop, Movie Magic Scheduling

Recommended Instructional Aids

It is recommended that instructors have access to the following items:

1.   Cart, AV (2 per program)
2.   Tool kit (1 per program)
3.   Video screen (1 per program)
4.   TV (1 per program)
5.   VCR/DVD (1 per program)
6.   Video camera, DVD (1 per program)
7.   Destination presentation system (1 per program)
8.   Data video projector (1 per program)
9.   Smart board (1 per program)

*Equipment choices should be adjusted to modern advances and budgetary constraints.

Simulation & Animation Technology

Capitalized Items

1.   PC graphics workstation or Mac Pro and monitor
2.   PC tablet or ipad

Non-Capitalized Items

SOFTWARE—Unity 3D, Maya 3D Studio Max, Adobe Suite

Recommended Instructional Aids
It is recommended that instructors have access to the following items:

1.   Cart, AV (2 per program)
2.   Tool kit (1 per program)
3.   Video screen (1 per program)
4.   TV (1 per program)
5.   VCR/DVD (1 per program)
6.   Video camera, DVD (1 per program)
7.   Destination presentation system (1 per program)
8.   Data video projector (1 per program)
9.   Smart board (1 per program)

*Equipment choices should be adjusted to modern advances and budgetary constraints.

CURRICULUM DEFINITIONS AND TERMS

- Course Name – A common name that will be used by all community colleges in reporting students

- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students

- Classification – Courses may be classified as the following:
    - Career Certificate Required Course – A required course for all students completing a career certificate.
    - Technical Certificate Required Course – A required course for all students completing a technical certificate.
    - Technical Elective – Elective courses that are available for colleges to offer to students.

- Description – A short narrative that includes the major purpose(s) of the course

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course

- Corequisites – A listing of courses that may be taken while enrolled in the course

- Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
    - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
    - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
    - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
    - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
    - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas

- Sequencing of the course within a program is left to the discretion of the local college. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors. Programs that offer an Associate of Applied Science Degree must include all of the required Career Certificate courses, Technical Certificate courses **AND** a minimum of 15 semester hours of General Education Core Courses. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester. Each community college specifies the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college.

- In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework.
- Revising or extending the student learning outcomes
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)